ABSTRACT OF THE DISCLOSURE

Disclosed a SQUID (Superconducting QUantum Interference Device) sensor using an auxiliary sensor, including: a SQUID sensing unit having a SQUID and a first feedback coil for creating a magnetic field at a periphery of the SQUID; an auxiliary sensor having a lower magnetic sensitivity and a higher operation range than the SQUID sensing unit; and a sensor reading unit for operating the SQUID sensing unit and the auxiliary sensor to read out a signal of the SQUID and at the same time, supplying the SQUID sensing unit with an offset magnetic field through the first feedback coil.